



DEVELOPMENT SOLUTIONS FOR THE EU FOOD MARKET: FUNCTIONAL FOODS

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Abstract *Faced with significant changes and mutations at consumer level, the EU food market finds itself in a position in which it has to function by rules that could be considered “non-specific”. From a traditionally inelastic market, it has gradually become a consumer market on which the producers have to innovate constantly in order to meet the demands of the consumers who are in search of new foods, which would have new properties and would satisfy superior needs. Therefore, diversifying one’s assortment of goods is key to the producers’ survival, and the functional foods are one of the ways chosen to this end.*

Key words:

Consumer, nutrition,
medi-foods, food,
nutrition, quality

1. Introduction

Functional food products, which are called medical foods or „medi-food”, are different from other categories of foods first and foremost due to their nature, as they are results of specific industrial processing the role of which is often to give them the functional properties they are said to have. Medi-food is an important concern of the large food producers in the European Union. This is so because the medium and small-sized producers lack both the financial capacity and the necessary connections that would allow them to invest in research and development projects in this area.

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What distinguishes functional foods from conventional food is the nutritional function associated to them (assigned by the manufacturer). This function is evidenced by advertising mentions which suggests that the product has a property that allows, after consumption, the obtaining of a beneficial effect on consumer's health (EFSA 2013).

As a market phenomenon, functional foods, the problems of incompleteness of scientific evidence and those arising by laws that restrict the room for maneuver in publicity, not always outweigh the effect of

market pressure. Although the price of some of them is still high (research costs are quite high and are part of the added value), the share of these products in the expenditures on food consumption is high. And although in the overall food sales, their presence is still one low, functional food are on the shelves of all supermarkets in the EU countries.

The emergence of this food category is due to a convergence of interests of the producers and the consumers. It is, more precisely, the aggregate action of the three major events that caused the need for innovation in EU production of food items. Their combined effects explain the special interest of EU food industry to invest in this food category (Magnan, 1998, 130).

1.1 Features and Composition

Technically speaking, functional food is not medicine, even if the term “medi-food” counts on such an ambiguity of meaning. By definition, this food *must contain a substance with a positive effect on one or several bodily functions*, apart from the basic nutritional benefits. Nevertheless, it does not have curative value, it cannot be prescribed by doctors, it does not have a special administration regime, and most importantly it does not need special marketing authorization from pharmaceutical authorization bodies. Moreover, since the beneficial substance it contains has to be one that is added or has enhanced effects, this food cannot be considered natural food with specific functions such as fatty fish which naturally contains polyunsaturated fatty acid omega-3 that is involved mainly in lowering cholesterol levels.

As for the effect this food can have, it depends on the specific substance it contains. Thus, the *prebiotics* (some types of sugar and fibers)-enriched functional foods allegedly favor digestion by stimulating the development of probiotic bacteria in the intestines, having a positive effect on health. Foods which *contain antioxidants* allegedly help reduce the risk of cardiovascular diseases. *Probiotic bacteria-enriched* foods allegedly stimulate the immune system of the body, thus reducing the risk of digestive diseases. *Phytosterol-enriched* foods have a role in reducing cholesterol (Riout-Milliot, 2007) and, finally, *allergens* (such as lactose) can be extracted from or replaced in some of such foods.

The active elements in their composition can come from a whole range of more important sources such as *fatty fish* (tuna or sardine) from which the famous omega-3 (polyunsaturated fatty acid) is extracted, the *vegetable oils* (sunflower or rape) from which phytosterols are extracted, a *series of edible plants* which are used to extract prebiotic compounds that are mainly oligosaccharide that the human body cannot assimilate and which are classified as nutritional fibers. Inulin and oligofructose extracted from chicory roots are very much used. One source can also be *certain bacteria with probiotic role*. The most frequently used ones are those from the types *Lactobacillus* and *Bifidobacterium* (Bettayeb, Alicaments. Ils mettent la sante au menu, 2007).

1.2 Production and Assortment

The simplest method of turning a conventional food product into a functional one is its *fortification*, which implies enriching the active substance it contains naturally. Thus, there are many calcium and vitamins-enriched dairy products and fruit juices. Depending on how compatible the respective compound is with the food product (whether native, concentrated or added), it can be added as it is or chemically modified. Thus, polyunsaturated fatty acids are added in the form of emulsion for better solubility and combination with the water in the product. One indirect method of adding components is to change the way of raising the animals, which give the respective products. By feeding chicken derivatives of algae or fish oils, they can give omega-3 enriched eggs.

The presence of such components also determine the assortment (Riout-Milliot, 2007) of functional foods, which is made up of *omega-3-rich products* (vegetable oils, milk, yoghurt, margarines, eggs, biscuits, toast, energizing bars, fruit juice or even pork fitch recently and some cold meats), *probiotic organisms-rich products* (sugar or sugar-free fermented milk and mostly yoghurts), *phytosterol-rich products* (mainly margarines as well as yoghurts and dairy drinks) and

nutritional fibers-rich products (bread, breakfast cereal, toast, natural fruit juices, yoghurts and even some pasta).

1.3 Real and Potential Benefits

The advertising producer do to this kind of food is rich in arguments for people to eat them. Thus, when it comes to omega-3-rich foods, the main argument is the benefit for the heart and the vascular system. As for probiotic bacteria food, the arguments are “the good functioning of the intestinal bacteria and making the natural protection of your organism stronger”, according to the producers that patent the cultures they use (the most famous are *Lactobacillus casei* – Actimel – and *Bifido bacterium animalis* – Activia). As for phytosterols, the advertisements clearly state the role they have in lowering cholesterol levels which has an important potential for the market. The role of fiber-enriched foods ranges from the fight against constipation and normalizing sugar levels to protection against colon cancer. This message, in the general context of a drop in fiber-rich food consumption (to about 17 grams per day against a daily need of 30 grams), has a special impact and is an excellent argument for producing this type of products.

As for the real effects of these foods (Bettayeb, Alicaments. Ils mettent la sante au menu, 2007), some of them, such as the Actimel by Danone, have been subject to recognized research in some EU States and were allowed to exhibit explicit statements about their benefits for human health. Others, such as Activia yoghurts, have been tested on human subjects and such research was recognized by the scientific community. But most often than not, for the majority of food products, the benefits you can read on their labels are unclear, unverified or even unrealistic.

1.4 Legal Aspects

In order to ensure the correct protection of consumer (nutritional, food safety and economic) interests, the advertisement of functional foods is very strict in the European Union. The advertisements that are authorized to describe positively the health benefits of a functional food product are limited by law according to an a priori logic: tests must be carried out before marketing the product. This system has been confirmed and strengthened by the publication on December, the 30th, 2006, in the EU Official Journal, of a new directive that makes it compulsory to validate the producers' statements about their products by an expert committee authorized by the public bodies. Functional food products are also the subject of the legislation on enriched foods, voted by the European Parliament on June, the 16th, 2006 (Bettayeb, Alicaments. Ils mettent la sante au menu, 2007).

Furthermore, the European Union strictly forbids any allegation that a food product can help prevent, treat or cure diseases (such as “chewing gum to cure cold” or “anti-cancer beverages”). A case in point (Hertel, 2007) is Actimel marketed by Danone. In France, it is marketed under the label “Actimel L. casei defensis”, which “strengthens the natural defenses of your body”. On the US market, where regulations are not so strict, it is sold under the label “DanActive, L. casei imunitas Immunity”, with clear reference to the immune system.

It is also forbidden to imply differences to other similar food products, which would refer to a more significant nutritional value (for instance, to write on oil labels that it does not contain saturated fatty acids, which suggests that the oils by other producers do). Producers are also not allowed to indicate any pathology because such a reference has strictly to do with medicine which has a totally different regime of authorization, marketing and administration.

Such restrictions, even if they are hurdles for the producers, can sometimes be bypassed. The food products can be re-categorized as “new products” or “products with new ingredients” in another EU State. If they receive authorization in the respective EU country, they are automatically authorized in the rest of the EU Member States as well, according to the mutual recognition principle.

2. Conclusions

Referring to functional foods as a phenomenon, we can say that neither the problems caused by incomplete scientific evidence, or those caused by a legislation that restricts the leeway in advertising were able to counterbalance the effect of the market pressure. Although the prices of many such products remain high (the rather high costs of research are part of their added value), their part in the food expenditures of an increasing category of consumers is large. Before the economic crisis, it was of 1-2% on the EU market (Hertel, 2007), as these products were highly present in daily consumption and on the shelves of all large retailers of the European Union Member States. And this despite the fact that current research studies carried out by the French Food Safety Agency show that the alleged benefits of such products on health are not confirmed but for a relatively small number of such food products (Abdoun și Poncet, 2011).

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